From the Editor

The flexibility that audiologists currently have when selecting appropriate amplification strategies for our patients continues to expand rapidly. Most audiologists are quite familiar with a variety of "external" amplification options, including a wide range of hearing aid and assistive listening device technologies. I believe most of our thoughts focus on cochlear implant technology when we think about beginning to remediate a hearing loss through a device that is implanted. Implantable hearing aids, however, continue to expand in use and application and currently may be the amplification option of choice, or at least be a viable alternative, for some listeners with hearing impairment.

One class of implantable hearing aid that has been increasingly discussed over the past several years is the middle ear implant (MEI). A second class, based on bone conduction, has been in use in the United States for much longer. It is obvious that the nature of sound delivery used in implantable hearing aids is quite different than traditional air conduction systems. It is also evident that the function of, and philosophy behind implantable hearing aids varies tremendously.

In this issue we are fortunate to have a number of experts who provide insight into implantable hearing aid function, application, and important differences across products. In the first article, Marshall Chasin MSc, Reg. CASLPO, Aud(C), provides an overview of the technology that is currently available. Chasin has been involved with implantable hearing aids since the early 1990s. He has extensive clinical experience with the bone anchored hearing aid (BAHA) and research experience with MEIs. He is a frequent author and editor in many journals dealing with implantable hearing aids and has written articles ranging from reviews of technology to innovative clinical assessment techniques. Chasin is currently the coordinator of research at the Canadian Hearing Society in Toronto, and the director of auditory research at the Musicians' Clinics of Canada. He is an adjunct professor of linguistics at the University of Toronto (Acoustic Phonetics) and of audiology at the University of Western Ontario.

In our second article, Phillip S. Wade, DDS, MD, FRCS (C) discusses some of the medical aspects of implantable hearing aids. Dr. Wade is a staff doctor at the Toronto General Hospital and has had a dual appointment in dentistry and ENT since 1977. He is also currently an assistant professor at the University of Toronto and has held an ENT staff appointment at the Makham Stouffville Hospital, where he has been the director of the BAHA program since 1990. Dr. Wade is also the medical director at the Canadian Hearing Society in Toronto.

Following Dr. Wade's article, five articles are presented from industry experts. Articles include those written by (in alphabetical order by company): (1) Patrik Westerkull, MSc Eng Ph (representing Entific Medical Systems); (2) A.U. Bankaitis, PhD and John M. Fredrickson, MD, PhD (representing Otologics); (3) Pamela Matthews, MS (representing SOUNDTEC, Inc); (4) Kai Kroll, MSEE, Iain L. Grant, MD, and Eric Javel, PhD (representing St. Croix Medical, Inc); and (5) Deborah Arthur, MA (representing Symphonix Devices, Inc.). These authors were asked to describe their products operation and application, as well as the philosophy behind their development, in as unbiased a manner as possible. While some bias will obviously be present in each of these articles, we felt that the readership might appreciate a clear understanding of each manufacturer's philosophy.

The articles in this issue of *Trends in Amplification* reveal that the technology of implantable hearing aids is certainly progressing at a rapid pace, and that we can look forward to the availability of an increasing number of devices. From the reduction of retention issues that are expected from bone anchored devices, to the reduction in occlusion problems by some MEI, the potential advantages of these systems are obvious. Like all hearing aid technology, however, potential positives must be weighed against possible negatives. It is a goal of this issue to provide readers information that may help with this difficult, but important decision as it is applied to individual patients.

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Editor-in-Chief